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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------|---------------------|------------------|
| 10/588,738      | 08/04/2006  | Americo A. Migliaccio | JHUMDM (PCT)-US     | 4623             |

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12/26/2007

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| EXAMINER |
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HASAN, MOHAMMED A

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| ART UNIT | PAPER NUMBER |
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2873

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| MAIL DATE | DELIVERY MODE |
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12/26/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/588,738             | MIGLIACCIO ET AL.   |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Mohammed Hasan         | 2873                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/15/2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 21-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 5-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2006 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Claims 21-40 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 11/15/2007.
2. Applicant's election without traverse of claims 1-20 in the reply filed on 11/15/2007 is acknowledged.

***Priority***

3. Receipt of acknowledged of papers submitted under 35 U.S.C. 119 (a) – (d), which papers have placed in the file.

**Oath/Declaration**

4. Oath and declaration filed on 8/4/2006 is accepted.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bees (7,234,815 B2).

Regarding claim 1. Bees discloses ( refer to figures 1 and 2) a device (30) for measuring the three-dimensional movements of an eye, device comprising: a means for marking an array of positions on eye whose movements are to be measured, a means for capturing the two-dimensional (x-y) , digital images , image capturing means having an optical axis and a prescribed spectral range, a means for illuminating said marker array with a light source whose output is in a spectral range that is chosen from the group consisting of those that are either within or outside of said spectral range of image capturing means, a means for aligning said optical axis of image capturing means with the center of said eye (column 4, lines 20-67).

Bees discloses all of the claimed limitations except eye-marked positions as eye is moved and a means for computing the three-dimensional locations of array of eye-marked positions from the information contained in said captured digital images.

However, Bees discloses filter 4 can be displaced three dimensionally and three dimensional movement may be controlled and monitored by a controller 25 (column 5, lines 33-35).

It would have been obvious to one of ordinary skill in the art at the time invention was made to provide a three dimensional movement controller 25 in to the Bees three dimensional eye movement device for the purpose of an to reduce intensity of the light as taught by Bees (column 2, lines 10-15) .

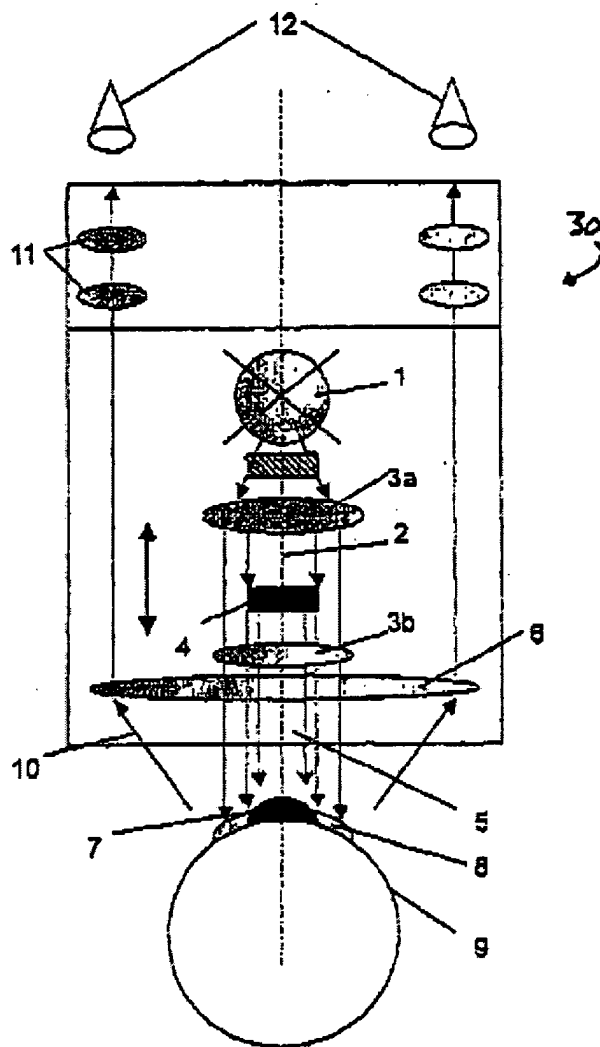


Fig.1

Regarding claim 2. Bees discloses ( refer to figure 1 ) further comprising a means for fixing the position of image capturing means relative to the position of eye (9) whose movements are to be measured.

Regarding claim 3. Bees discloses ( refer to figure 1 ) wherein alignment means including an alignment light source (1).

Regarding claim 4. Bees discloses ( refer to figure 1 ) wherein alignment means including an alignment light source (1).

Regarding claim 19. Bees discloses, wherein said image capturing means having a digital camera (2), a computer processor (32) and a high-speed interfacing device that connects said camera (2) and said processor (32) ( as shown in figure 1 and 2).

Regarding claim 20. Bees discloses , wherein processor (32) being configured to fit within a computer chosen from the group herein described as a desktop, laptop, notebook or sub-miniature notebook (as shown in figures 1 and 2).

#### ***Allowable Subject Matter***

6. Claims 5-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to show , wherein array marking means including a fluorescent pigment and wherein array marking means including an anti-Stokes fluorescent pigment and wherein said means of marking an array of positions on said eye whose movements are to be measured having three markers (6) arranged in a 45

degree right triangle and wherein means of computing the locations of said markers having an algorithm having a rotation matrix that describes the eye rotation required to move said markers (6) from a first position to a second position.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The closest prior art Nohda (4,529,280) discloses an apparatus for subjectively measuring the refractive power of an eye and Persson et al (4,180,323) discloses an alignment system and ophthalmic instrument incorporating the same.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammed Hasan whose telephone number is (571) 272-2331. The examiner can normally be reached on M-TH, 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky L Mack can be reached on (571) 272- 2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MH  
December 20, 2007

*M. Hasan*  
Mohammed Hasan  
Examiner, Au-2873